AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1-18. (Cancelled)

19. (Currently Amended) A method of applying a braking force to a wheel of an aircraft moving along the ground, wherein the method comprises the steps of:

estimating the conditions at which the wheel would skid; and

applying [[a]] the braking force to the wheel in dependence on the results of the estimating step; [[and]] wherein

the estimating step including both taking into account the vertical load transmitted between the ground and the wheel and taking into account a variable relating to the braking force to be applied.

20. (Previously Presented) A method according to claim 19, wherein the braking force is applied at a level at which it is judged that the conditions for skidding will not be met whilst maintaining effective braking.

21. (Previously Presented) A method according to claim 19, wherein the estimating step includes taking into account a variable relating to time, whereby estimating the conditions at which the wheel would skid includes estimating when the wheel is likely to skid.

22. (Currently Amended) A method according to claim 19, wherein the estimating step includes the performance of a calculation, in which a parameter relating to the vertical load transmitted between the ground and the ~~wheel~~ wheel is taken into account.

23. (Previously Presented) A method according to claim 22, wherein a slip parameter is taken into account when performing the calculation, the slip parameter being such that the amount of slip between the ground and the wheel and the slip parameter are interrelated.

24. (Previously Presented) A method according to claim 23, wherein data is ascertained regarding the relationship between slip and the ground to wheel friction coefficient and at least some of the data so ascertained is used in the calculation.

25. (Previously Presented) A method according to claim 23, wherein the method includes recording, over time, data relating to the relationship between the value of the friction coefficient and the value of slip.

26. (Previously Presented) A method according to claim 23, wherein the method includes ascertaining the slip parameter relating to the slip between the ground and the wheel by means of measuring parameters relating to the aircraft speed and the speed of the periphery of the wheel.

27. (Previously Presented) A method according to claim 19, wherein the method further comprises a step in which a prediction is made regarding how the vertical load will change and the prediction is taken into account when performing the estimating step.

28. (Previously Presented) A method according to claim 19, wherein the method is so performed that, if a skid is detected, the braking force is reduced in a way that takes into account data relating to the vertical load transmitted between the ground and the wheel.

29. (Currently Amended) A method according to claim 19, wherein ~~the brakes are actuated by~~ braking is applied by means of a hydraulic system, and the method includes a step of ascertaining a parameter representative of the hydraulic pressure in the brake system, the method including a step of calculating the braking force to be applied to the wheel, the parameter being taken into account when performing that calculation.

30. (Currently Amended) A method of applying a braking force to a wheel of an aircraft moving along the ground, wherein the method comprises the steps of:

ascertaining a first~~, slip,~~ parameter~~, the slip parameter being such that~~ dependent on the amount of slip between the ground and the wheel ~~and the slip parameter are interrelated~~;

ascertaining a second~~, friction coefficient,~~ parameter~~, the friction coefficient parameter~~ depend[[ing]]ent on the ground to wheel friction coefficient;

ascertaining a third parameter depend[[ing]]ent on the vertical load transmitted between the ground and the wheel;

recording, over time, data relating to the relationship between the first and second parameters;

estimating the conditions at which the wheel would skid, the estimating step including the performance of a calculation, in which the first, second and third parameters are taken into account; and

applying a braking force to the wheel in dependence on the results of the estimating step.

31. (Previously Presented) A method according to claim 30, wherein a control unit controls the braking force applied such that the level of slip nears, but does not exceed, a level at which unstable braking starts, the control unit using the recorded data in order to assess the point at which unstable braking starts.

32. (Previously Presented) A method according to claim 30, wherein at least some of the data relating to the relationship between the first and second parameters is used in the calculation performed in the estimating step.

33. (Previously Presented) A method of applying a braking force to a wheel of an aircraft moving along the ground, wherein the method comprises the steps of:

making a prediction concerning how the vertical load transmitted between the ground and the wheel will change;

estimating the conditions at which the wheel would skid, the estimating step taking into account the prediction concerning how the vertical load will change; and

applying a braking force to the wheel in dependence on the results of the estimating step.

34. (Previously Presented) A method of applying a braking force to a wheel of an aircraft moving along the ground, the brakes being actuated by means of a hydraulic system, wherein the method comprises the steps of:

estimating the conditions at which the wheel would skid;

the estimating step taking into account the vertical load transmitted between the ground and the wheel;

ascertaining a hydraulic pressure parameter representative of the hydraulic pressure in the brake system, calculating the braking force to be applied to the wheel taking into account the results of the estimating step and the hydraulic pressure parameter; and

applying the braking force so calculated to the wheel.

35. (Currently Amended) A method according to claim 34, wherein the method includes a step of estimating how the braking force applied changes with changes in ~~ether~~ other variables and varying the braking pressure applied to account for the changes in such other variables.

36. (Previously Presented) A braking control apparatus for controlling the braking of an aircraft wheel and a processor associated with the braking control apparatus, wherein:

the apparatus is connectable to the brakes of at least one wheel of an aircraft,

the processor is able to be connected to receive in use signals relating to the vertical load transmitted between the ground and the aircraft wheels;

the processor is so arranged that in use it performs a calculation using data derived from the signals received by the control apparatus and estimates the conditions at which the wheel would skid taking into account both the vertical load transmitted between the ground and the wheel and a variable relating to the braking force to be applied; and

the control apparatus is so arranged that in use the control apparatus actuates the brakes in dependence on the results of the calculation performed by

the processor, whereby the control apparatus is able to control the actuation of the brakes taking into account the vertical load and other conditions that affect the likelihood of skidding.

37. (Previously Presented) A braking control apparatus for controlling the braking of an aircraft wheel and a processor associated with the braking control apparatus, wherein:

the apparatus is connectable to the brakes of at least one wheel of an aircraft;

the processor is able to be connected to receive in use signals relating to the vertical load transmitted between the ground and the aircraft wheels;

the processor is so arranged that in use it performs a calculation using data derived from the signals received by the control apparatus, the calculation including:

making a prediction concerning how the vertical load transmitted between the ground and the wheel will change, and

estimating the conditions at which the wheel would skid taking into account both the vertical load transmitted between the ground and the wheel and the prediction concerning how the vertical load will change, and

the control apparatus is so arranged that in use the control apparatus actuates the brakes in dependence on the results of the calculation performed by the processor, whereby the control apparatus is able to control the actuation of the

brakes taking into account the vertical load and other conditions that affect the likelihood of skidding.

38. (Previously Presented) A control unit and a landing gear assembly for an aircraft, the assembly including at least one aircraft wheel, the control unit being able in use to actuate the brakes of said at least one wheel, wherein:

the control unit includes a processor, which is connected to receive data signals relating to the vertical load transmitted between the ground and the aircraft wheels, and which in use performs a calculation using data derived from the data signals received by the processor and estimates the conditions at which the wheel would skid, the estimating step taking into account both the vertical load transmitted between the ground and the wheel and a variable relating to the braking force to be applied, and

the control unit is so arranged that in use the control unit actuates the brakes in dependence on the results of the calculation performed by the processor.

39. (Previously Presented) A control unit and a landing gear assembly for an aircraft, the assembly including at least one aircraft wheel, the control unit being able in use to actuate the brakes of said at least one wheel, wherein:

the control unit includes a processor, which is connected to receive data signals relating to the vertical load transmitted between the ground and the aircraft wheels, and which in use performs a calculation using data derived from the data

signals received by the processor and estimates the conditions at which the wheel would skid, the estimating step taking into account both the vertical load transmitted between the ground and the wheel and a prediction concerning how the vertical load will change, and

the control unit is so arranged that in use the control unit actuates the brakes in dependence on the results of the calculation performed by the processor.

40. (Previously Presented) An aircraft comprising a braking control apparatus and processor according to claim 36.

41. (Previously Presented) An aircraft comprising a braking control apparatus and processor according to claim 37.

42. (Previously Presented) An aircraft comprising a control unit and a landing gear assembly according to claim 38.

43. (Previously Presented) An aircraft comprising a control unit and a landing gear assembly according to claim 39.